State of California Business Transportation and Housing Agency

M e m o r a n d u m

To: CHIEF DEPUTY DIRECTOR
DEPUTY DIRECTORS
DISTRICT DIRECTORS
DIVISION CHIEFS

Date: August 9, 2001

File: 604.7
Project Study Reports

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF DESIGN
MS 28

Subject: Project Development Procedures Manual Bulletin: Project Initiation Documents for Project Development Support Components

PURPOSE

The attached Project Study Report (Project Development Support) [PSR(PDS)] Outline revises the guidance on the preparation of PSR(PDS). The PSR(PDS) is a project initiation document which is used to program the project development support for State Transportation Improvement Program (STIP) candidates. The PSR(PDS) describes the transportation problem, identifies the scope of the viable alternatives, and provides an estimate of the project development support resources required for the specific project. Support resources may be programmed in the following sequential components: (1) Project Approval/Environmental Document (PA/ED); (2) Plans, Specifications and Estimate; (3) Acquisition of Right of Way; and (4) Construction Management and Engineering.

BACKGROUND

Government Code Sections 14526 (b) and 14527 (f) provide that neither the Interregional Transportation Improvement Program nor the Regional Transportation Improvement Program may include a project without a Project Study Report or project study report equivalent.

SB 45, added by Chapter 622 of the Statutes of 1997, defines the STIP as a resource management tool. SB 45 established the framework for project development support components to be programmed prior to the programming of right-of-way and construction capital components. On October 29, 1998, the Division of Design issued guidance on the preparation of the PSR(PDS) as a streamlined document to program project development support only for the PA/ED phase of the project. Since that time, the California Transportation Commission (CTC) has adopted the CTC Guidelines for Preparation of the Project Study Report (December 8, 1999).

AB 1012, Chapter 783 of the Statutes of 1999, was passed with the intention of expediting the use of the excessively large cash balance in the State Highway Account. One of the objectives of AB 1012 was to facilitate project development work on needed transportation projects to produce a steady flow of construction work by adding an Advanced Project Development Element (APDE) to the fund estimate. Caltrans and the regional transportation agencies may propose projects for the APDE using the PSR(PDS) for programming the following two STIP project development components: (1) PA/ED and (2) plans, specifications, and estimate.

In an effort to minimize design changes that occur after project approval, a memorandum dated, July 28, 2000, required that the PSR (PDS) be used to program all projects requiring an environmental document (e.g., negative declaration or environmental impact report).

Action taken by the Commission in August 2000 allows the application for Traffic Congestion Relief Plan (TCRP) to serve as the project study report. The discussion on this action is documented in the Commission's Annual Report (page 5, volume 1-A). For these projects, STIP programming will be limited to the support phases or components that are approved in the TCRP project application, unless a draft project report and draft environmental document has been prepared or environmental approval has been obtained.

In summary, there are several advantages to programming project components. Initial components of a project can be included in the STIP when the life cycle of a project exceeds the programming cycle. The completion of the engineering and environmental studies prior to programming the capital costs builds concurrence on the scope and increases the accuracy of the capital cost and construction schedule. Incremental programming also allows for managing the cash balance through optimal use of STIP funds.

As the use of the PSR(PDS) has increased as a resource management tool, we have revised the guidance for the PSR(PDS). It is the intent of this guidance to incorporate and share information from lessons learned.

DISTRIBUTION

It is recommended that a copy of this Project Development Procedures Manual Bulletin be distributed to all holders of the Project Development Procedures Manual based on the list maintained by Caltrans Publications Unit. A copy of the memorandum shall be placed on the Caltrans Design Program Website: http://www.dot.ca.gov/hq/oppd/pdpmb/pdpmbidx.htm

IMPLEMENTATION

This Project Development Procedure Manual Bulletin supersedes the Project Development Procedures Bulletin dated October 29, 1998.

The PSR(PDS) is necessary for all new STIP projects either requiring an environmental document (Negative Declaration or Environmental Impact Report) or applying for programming under the APDE. Projects may use the TCRP application as the project study report. When a project can be accelerated such that construction dollars can be realistically programmed at the Project Initiation Document phase, districts may request an exception to the change control policy, by submitting a "Fact Sheet Exception to the PSR(PDS) Requirement" to the District Design Coordinator. A copy of the Fact Sheet format can be found on the Design Program Website. An approved Fact Sheet Exception does not ensure that there will be STIP funds available for any one or all of the project components.

Note that projects which are funded through the SHOPP Program and do not have any STIP funding will continue to use the standard PSR or the project initiation document that was developed for a specialized program (i.e., PSSR, NBSSR, etc.).

Major revisions to the PSR(PDS) outline are:

- Expanded description of the contents for each section.
- Improved title page which clearly defines the PSR(PDS) as a document for only programming resources and not capital.
- Use of cost ranges for the cost estimate.
- Inclusion of boilerplate language for the cost estimates.
- Standardized tables for resource estimate, cost estimate and schedule.

- Documentation Matrix
- Project Evaluation Checklist

The Performance Measure Evaluation checklist is no longer required as an attachment. The attached Project Evaluation Checklist can be used as a tool to highlight issues and opportunities that may affect the project scope, cost and schedule. It has been developed in cooperation with Programming and can be use as a guide for providing information for status meetings.

Original Signed By

KARLA SUTLIFF
Acting Chief
Division of Design

Attachments:
1. Project Study Report (Project Development Support Outlines)
2. Project Study Report (Project Development Support Outlines) Estimate
3. Design Scoping Checklist
4. Traffic Scoping Checklist
5. Project Evaluation Checklist
6. Boiler Plate Outline

GUIDANCE

Project Study Report (Project Development Support) Outline

The purpose of this outline is to identify the key elements that should be documented in the PSR(PDS). The Instructions for the outline are shaded.

The PSR(PDS) is a statewide programming document. The PSR(PDS) identifies the transportation problem and the alternatives that will be studied in order to make a decision on an appropriate solution. Because it is used as a decision-making document it must identify the key issues of the transportation problem, any major issues that should be investigated and the effort and resources that are needed to complete the studies and project approval process. It is designed so that the important information can be easily obtained from the PSR(PDS) text. The attachments should contain detailed information that is needed to support or clarify information in the body of the report. Information from detailed studies is summarized in the PSR(PDS), while actual studies with raw data (e.g., TASAS data) and detailed analysis are part of the project files.

Title Sheet:
The title sheet contains a statement that identifies (1) the STIP components that are being recommended for programming and (2) the engineering document that will be used to recommend programming future support and capital components. This statement has been scripted to program only the project approval and environmental support component. This statement can be edited to include the programming of additional sequential STIP components. Underlined portions may be edited if additional support components are to be programmed. (Note: Remove underlining for specific project). Programming additional components must be consistent with current programming and funding priorities.

The Outline Form without the guidance text is available in a Microsoft Word Document on Caltrans Design Website:

http://www.dot.ca.gov/hq/oppd/pdpmb/pdpmbidx.htm

Refer to Chapter 9 of the Project Development Procedures Manual and Project Development Procedure Bulletins for general guidance on project initiation documents.

Dist. – Co. - Rte. – KP (PM).
Month/Year

PROJECT STUDY REPORT
(Project Development Support)

This document can be used to program only the Engineering and Environmental Support for Project Approval and Environmental Document component. The remaining support and capital components of the project are preliminary estimates and are not suitable for programming purposes. Either a Supplement PSR or a Project Report will serve as the programming document for the remaining support and capital components of the project.

Vicinity Map

Show:

- Study limits
- Topographical Features Listed in Report
- North Arrow

On Route _____

Between _____

And _____

SUBMITTED BY: (Optional)

_____
LOCAL AGENCY OR INTIATING FUNCTIONAL MANAGER

APPROVAL RECOMMENDED BY:

_____
PROJECT MANAGER

APPROVED:

_____ _____
DISTRICT DIRECTOR *DATE*

Dist. - Co. - Rte. – KP (PM)

This Project Study Report (Project Development Support) has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

REGISTERED CIVIL ENGINEER *DATE*

OUTLINE
PROJECT STUDY REPORT
(Project Development Support)

Dist.-Co.-Rte.-
KP (PM)
RU EA
Program
Identification
Project Limits

1. Introduction

The introduction is a summary of the information presented in the report and should be no more than two paragraphs. In the introduction, identify the number of alternatives that will be studied and the range of capital and right-of-way costs that are associated with each alternative. Also identify the resources that are needed to complete the proposed programmed components (e.g., project approval and the environmental document phase), the schedule for proposed completion of the programmed activities, and the identification of proposed funding sources. The introduction should present the initial project category, the intended designation of the facility, and any known project approvals needed for each alternative. (PDPM ,Chapter 12).

2. Background

Describe the facility. Briefly cover any prior project history that will help in the understanding of why this project is going forward. Identify the project sponsors and project proponents. Discuss both local and regional agencies agreement of the project's need and purpose. Discuss any actions or commitments that have taken place to date regarding the proposed project. Identify what steps have been taken to obtain public involvement in selecting the alternatives to be studied. Note that this discussion of public involvement

is different from the discussion in Section 4 "Alternatives." The discussion in Section 4 focuses on identifying the public involvement needed in selection of the preferred alternative and resources needed to facilitate this involvement.

3. Need and Purpose –

Provide a concise discussion of why the project is needed. The project may be needed to improve safety conditions, provide congestion relief, improve traffic operations, provide access, or repair and maintain the existing facility. Additionally, this section should discuss applicable program objectives (e.g., Interregional Strategic Plan or Regional Transportation Plan) served by this project. This discussion should be consistent with Section 5 on System and Regional Planning.

The need and purpose should be generally supported by available information. Highlight key issues that have an effect on the need and purpose. Examples of supporting information that may be available are:

- Existing and forecasted traffic data.
- Level of Service
- Capacity
- Land use development proposals generating the need for State highway improvements.
- Maintenance Condition Surveys
- Summarized Safety and Accident Information Reports

Briefly list any controversial aspects or issues that may affect the approval of the project (e.g., known opposition, resources agency concerns, etc). It should be noted there are specific situations where the regulatory agencies must buy in on both the need and purpose of the project and on the alternative criteria. The environmental staff must be involved early in the project to identify these situations and assist in obtaining concurrence from the regulatory agencies.

4. Alternatives –

Concurrence by the Project Development Coordinator for further study of the viable alternatives included in this PSR(PDS) does not constitute approval of any non-standard features identified currently or in the future. Separate documentation and approval(s) will be required as per Chapter 21 of the PDPM.

Discuss all viable project alternatives that will satisfy project need and purpose. Usually limit the discussion to three paragraphs for each alternative. Provide an overview of the issues, identify known constraints and define the studies that are needed to evaluate each of the viable alternatives.

Alternatives that should always be considered are:

- The “No Build Alternative”
- The “Minimum Build Alternative”
- The alternative that meets current design standards.

The exclusion of any of the above alternatives must be explained. If the alternative that meets current design standards is rejected, the approval of an exception to mandatory design standards must be obtained and attached. Rejected alternatives and the justification for rejection must be discussed.

The project study footprint for each alternative must be established to include reasonable modification to the alternative. Improper identification of the project study footprint can result in unanticipated studies and project delays.

Attachments should include schematic maps of the alternatives and typical cross-sections as appropriate.

The following questions should be answered for each alternative:

- What is the scope of the alternative?
- What are project specific issues (e.g., opportunities, threats and constraints.)?
- What type of information is needed to evaluate and confidently estimate the scope, cost, and schedule for that alternative? Identify the types of engineering, right of way and environmental studies and resources that are needed to provide this information. Specific information on right of way and environmental issues should be discussed in Section 6 and 7. Recommend the timing and the level of the study that is needed to minimize changes to the scope, cost and schedule. If information is needed to facilitate a design decision, schedule the study early. However, if the information is not required to make a design decision, the study can be scheduled based on the workload and the delivery schedule. Note that although some information is important to the final design, the information does not affect the outcome of project decisions. It is important to document assumptions for recommendations.
- What types of multi-disciplinary activities that will be performed in order to facilitate the selection of an alternative that will best address the transportation problem, is safe, is acceptable to the community, reflects

the community's values, is functional and is at a reasonable cost? Be specific about any effort needed to obtain public involvement in the selection of the preferred alternative. Include any potential project approvals and project related approvals (PDPM, Chapter 12 and 13).

- Will the alternative require approval of a design exception? This evaluation will be based on the proposed design scope (e.g. number of lanes, location and length of the project, high occupancy vehicle (HOV) lanes, general interchange and intersection spacing). If an alternative requires a design exception, the Project Development Coordinator must concur that this is a viable alternative to be studied. Final approval of design scope and mandatory or advisory exceptions will be reviewed subsequent to completion of the engineering studies and will be documented in the Project Report. Include the following statement in the outline: "Concurrence by the Project Development Coordinator for further study of the viable alternatives included in this PSR(PDS) does not constitute approval of any non-standard features identified currently or in the future. Separate documentation and approval(s) will be required as per Chapter 21 of the PDPM."
- What is the estimated capital cost of each alternative? The capital cost should be expressed as a range and are not to be used for programming. The costs are for long-range planning.
- What are the operational impacts on the State highway due to the proposed alternative?

5. <u>System and Regional Planning</u>

Discuss the coordination and consistency of the proposed project with statewide, regional and local planning efforts using the District System Management Plan (DSMP) and Transportation Concept Reports (formerly Route Concept Reports), local and regional planning documents such as local general, specific area, and subdivision plans, the Regional Transportation Plans (RTP), Congestion Management Program (CMP), State Implementation Plan (SIP), and information on expected timing of future local development. A consultation with the IGR Coordinator may provide information on new land development projects that are not available in existing land use plans. Identify other State Highway improvements, local improvements and or any development projects within the immediate project vicinity. Also discuss the Regional and Program Objectives and the project consistency with fulfilling those objectives. Identify the date that the route was adopted, the designation of the route and describe scope of any applicable freeway or controlled access highway agreements.

6. Environmental Determination and Environmental Issues –

Briefly describe the known inventory of environmental resources and identify environmental issues. Identify existing known hazardous material/waste sites within or immediately adjacent to the proposed project. Are there potential adverse impacts that would affect the viability of alternatives? Based on the inventory of known environmental resources, describe the anticipated type of environmental document to be obtained for CEQA and identify who should be the lead agency. Describe the anticipated type of environmental determination for compliance with NEPA when involved. Provide the timeframe for completing the environmental document.

7. Right of Way

Briefly describe and compare for the proposed alternatives the right of way impacts and magnitude of impacts. Summarize impacts in terms of number of parcels that could be potentially affected, impacts to property access, preliminary estimate of right of way acquisitions. Identify and discuss any potential controversial acquisitions. See right of way data sheet.

8. Funding/Scheduling

The following tables are recommended to summarize funding and scheduling information in the PSR(PDS) as they provide the necessary level of detail for programming.

Identify the project development support costs needed to complete PA/ED, a estimated schedule for completion of major milestones and a cost estimate range for capital outlay and remaining support activities

Include the work plans in the attachments. The work plan can be in the form of a Gantt Chart to show the relationships between project tasks and milestones. The work plan is useful in assessing changes to any one item within the context of the whole project.

The “PS&E” and “Construction Complete” are used to predict the capital delivery of the next STIP cycle.

Capital Outlay Support Estimate for PA/ED

Fiscal Year	STIP PY's/$'s		Other Funding Sources PY's/$'s	
	PY's	$'s	PY's	$'s
00/01				
01/02				
02/03				
03/04				
Total Support Cost				

Document the assumptions made to determine the resource needs.

Capital Outlay Estimate

	Range for Total Cost	STIP Funds	Fund Source "A"
Alternative 1			
Alternative 2			
Alternative 3			
Alternative 4			

The level of detail available to develop these capital cost estimates is only accurate to within the above ranges and are useful for long range planning purposes only. The capital costs should not be used to program or commit capital funds. The Project Report will serve as the appropriate document from which the remaining support and capital components of the project will be programmed.

The capital costs provided in this document are not for programming purposes. Some examples of ranges that are: "less than $5M", "$5M-$25M", "$25M-$75M," or"$50M-$60". The breadth of range is based on available information and reasonable assumptions. In addition, there should be a discussion of a financial plan that identifies existing non-STIP funding sources that are being considered to complete the project.

The intent of the tables is to provide the following information:

- The cost range for each alternative.
- A list of the main funding sources for each alternative (i.e., RIP, IIP, TRCP)

– Other potential sources of funds (e.g., measure funds, developer funds).

Columns may be added to the table for each non-STIP funding source. A description of any specific funding commitment or constraint should be included in text following the table. For instance, if a city may be willing to contribute up to a fixed amount for sidewalk improvements. The city's participation must be discussed. Discuss any cooperative agreements that may be needed for various project components.

Tentative Project Schedule

Milestone	**Fiscal Year**
Circulate Draft Project Report/ Draft ED	
Public Hearing	
PA/ED	
PS&E	
Construction Completion	

Only the "PA/ED" milestone is to be used for programming commitments. All other milestones are used to indicate relative time frames for planning purposes.

The Project Schedule for the PA/ED phase is a delivery commitment. The work plan must be developed with concurrence from all functional units.

The "PS&E" and "Construction Complete" are used to predict the capital delivery of the next STIP cycle. If timeframes are different for each alternative, then develop alternative specific "PS&E" and "Construction Complete" schedules.

9. Programming Recommendation

Present the recommendation of the PSR(PDS) to program the project development support component for PA/ED in the STIP as discussed in the Funding/Scheduling section and to take the project alternatives identified in the Alternatives section for further study in the PA/ED phase. Identify any assumptions that were made. Identify any risks associated with the assumptions. Include a statement that alternatives may be added or revised during the PA/ED phase as more information becomes available.

10. District Contact

Give name and telephone number of District representatives to be contacted concerning questions on the PSR(PDS) submittal.

Additional Information:

– Signature of the Project Manager - In the concept of project management, responsibility for project development is assigned to a single individual [i.e., the Project Manager (PM)] for every State and special funded capital outlay project on the State highway system. PSR(PDS)'s are to include the endorsement of the PM; i.e., "APPROVAL RECOMMENDED BY" or "APPROVED BY" where authority has been delegated.

– Attachments -The following table provides only examples of the appropriate attachments and files. Each project should be evaluated as to the appropriate inclusion of specific reports and information.

Required Attachments to PSR(PDS)	**Optional Attachments to PSR(PDS)**	**Project Files and Supplemental Documents - note that key issues should be summarized in the PSR(PDS)**
Location and/or vicinity map	*Design Scoping Checklist or Equivalent Document	Previous Environmental Documents
Schematic Maps of the Alternatives	*Traffic Forecasting, Traffic Analysis and Traffic Operations Scoping Checklist or Equivalent Document	Biotic Assessment –
PSR(PDS) Cost Estimate for each alternative		Calculations for Level of Service
Project support cost estimate for PA/ED support		Raw Traffic Data
Preliminary Environmental Assessment Report or Equivalent Document		Complete Traffic Study
Right of Way Data Sheet or Equivalent Document		*Design Scoping Checklist or Equivalent Document
		*Traffic Forecasting, Traffic Analysis and Traffic Operations Scoping Checklist or Equivalent Document
		Initial Site Assessment (Hazardous Waste)

Required Attachments to PSR(PDS)	**Optional Attachments to PSR(PDS)**	**Project Files and Supplemental Documents - note that key issues should be summarized in the PSR(PDS)**
		Appraisal Report
		Technical Studies
		Detailed mapping
		Cooperative Agreements

*Functional scoping checklists have been provided and are worksheets for collecting and summarizing of pertinent information from specified functional units. Scoping checklists also document reviews by Headquarters' Liaisons. A Design Scoping Checklist is required, with approval of the Project Development Coordinator, for alternatives that include mandatory non-standard features. A Right of Way Data Sheet is required for all projects and must be attached. The Preliminary Environmental Assessment Report must be completed and attached for all projects. When the checklist is not required by the aforementioned reasons, the checklist should only be attached if it is needed to clarify specific issues. All required checklists must be retained in the project files.

Project Study Report – Project Development Support Cost Estimate

District-County-Route_____

KP(PM)_____

EA_____

Program Code_____

PROJECT DESCRIPTION:

Limits_____

_____

Proposed Improvement (Scope)_____

_____

Alternate_____

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	$_____
TOTAL STRUCTURE ITEMS	$_____
TOTAL ENVIRONMENTAL MITIGATION ITEMS	$_____
SUBTOTAL CONSTRUCTION COSTS	$_____
TOTAL RIGHT OF WAY ITEMS	$_____
TOTAL PROJECT CAPITAL OUTLAY COSTS	$_____

District-County-Route _____
KP(PM)_____
EA _____

I. ROADWAY ITEMS

	Average Cost per Lane KM	Number of KMs	Total Cost
Total Cost of Lane KMs	_____	_____	_____

Explanation: Include a brief (no more than 1 paragraph) discussion of the items that are included in the Average Cost per Lane KM. List any assumptions made for estimating the total cost of the Lane KMs. List a contact should further explanations be desired.

Remember that the capital costs provided in this document are not for programming purposes. Some examples of ranges that are: "less than $5M", "$5M-$25M", "$25M-$75M," or"$50M-$60". The breadth of range is based on available information and reasonable assumptions. The cost estimate provided in this report should then be escalated to the planned program year to establish the planning base cost for the project.

II. STRUCTURES ITEMS

	Structure (1)	Structure (2)	Structure (3)
Bridge Name	_____	_____	_____
Total Cost for Structure	_____	_____	_____

TOTAL STRUCTURES ITEMS $_____
(Sum of Total Cost for Structures)

Explanation: Include a brief (no more than 1 paragraph) discussion of the items that are included in the Total Structures Items Cost. List any assumptions made for estimating the Total Structures Items Cost. List a contact should further explanations be desired. (Structures is developing an estimating tool for the Structures Items.)

III. ENVIRONMENTAL MITIGATION

	Quantity	Unit	Unit Price	Item Cost
Environmental Mitigation	_____	_____	_____	_____

Explanation: Include a brief (no more than 1 paragraph) discussion of the items that are included in the Total Environmental Mitigation Cost. List any assumptions made for estimating the Total Environmental Mitigation Cost. List a contact should further explanations be desired.

IV. RIGHT OF WAY ITEMS

	ESCALATED VALUE
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$_____
B. Utility Relocation (State share)	$_____

TOTAL RIGHT OF WAY ITEMS $_____
(Escalated Value)

Anticipated Date of Right of Way Certification _____
(Date to which values are escalated)

Explanation: Include a brief (no more than 1 paragraph) discussion of the items that are included in the Total Right of Way Items. List any assumptions made for estimating the Total Right of Way Items or refer to the Right of Way Data Sheet. List a contact should further explanations be desired.

PDS Design Scoping Checklist

Project Information

District ____ County _____ Route _____ Kilometer Post (Post Mile) _____ EA _____

Description_____

_____

_____

_____

Project Manager _____ Phone # _____

Project Engineer _____ Phone # _____

Design Functional Manager_____ Phone # _____

Project Development Coordinator_____ Phone # _____

(Instructions for filling out)

Describe and identify in the following sections a general description of all improvements anticipated as part of the project scope. Analyze the existing highway system and identify improvements necessary to solve the transportation problem. The design improvements should be discussed in sufficient detail to identify the project's major geometric features. Also discuss in detail any planned roadbed widths that are less than standard widths. Address roadside improvements. Discuss any design issues that may be controversial during development of the environmental document. Approval of the alternatives to be studied must be obtained from the Project Development Coordinator. This checklist is not to be considered all encompassing but to identify major aspects of the project. Checking the box means yes or maybe. If left unchecked it implies no, but does not preclude one from validating the impacts during the Project Report phase.

Project Screening

(Attach the project location map to this checklist to show location of all design improvements anticipated)

1. Project Description as Noted in Regional Transportation Plan:_____

_____

2. Project Setting _____

   Rural or Urban _____

   Current land uses _____

   Adjacent land uses _____
   (industrial, light industry, commercial, agricultural, residential, etc.)
   Existing landscaping/planting_____

3. Route Adoption: Date _____ Type of Facility (Freeway, Controlled Access Highway, or Conventional Highway) _____

   Freeway Agreement: Date _____

Description of the Transportation Problem

_____
_____
_____
_____
_____

Proposed Scope of Work

_____
_____
_____
_____
_____
_____
_____
_____

The following pages are to be used for each alternative provided that the scope is significantly different. Bear in mind that if a route has been adopted as a Freeway we may not necessarily be designing to those standards. We may design for Conventional Highway standards as a stop-gap. This needs to be identified in the scoping checklist. Under the Roadway Design Scoping section each block needs to be checked if an alternative has a listed feature or activity to be studied.

Design Criteria

Type of facility to be considered? (more than one may apply)

Freeway Expressway Conventional Highway Urban Street

Other (specify) _____

Design Speed for highway facilities within the project limit? _____ km/hr

Design Period: Construction Year is? _____ Design Year is?_____

Design Capacity: Level of Service to be maintained over the design period is?

Mainline _____ Ramp _____ Local Street _____ Weaving Sections _____

Design Vehicle Selection?

STAA_____ California _____ Bus_____

Proposed Roadbed and Structure Widths

Forecasted Average Daily Traffic Volumes_____
Percent Truck Volume _____%

	Roadbed Width Existing / Proposed / Standard			Structure Width Existing / Proposed / Standard		
State highway						
Lane Widths	_____	_____	_____	_____	_____	_____
Left Shoulder	_____	_____	_____	_____	_____	_____
Right Shoulder	_____	_____	_____	_____	_____	_____
Median Width	_____	_____	_____	_____	_____	_____
Bicycle Lane	_____	_____	_____	_____	_____	_____
Local Street						
Lane Widths	_____	_____	_____	_____	_____	_____
Left Shoulder	_____	_____	_____	_____	_____	_____
Right Shoulder	_____	_____	_____	_____	_____	_____
Median Width	_____	_____	_____	_____	_____	_____

Bicycle Lane _____ _____ _____ _____ _____ _____

Any proposed roadbed widths less than standard should be discussed with the Project Development Coordinator to determine if the proposed non-standard feature results in a feasible project alternative for further study during preparation of the environmental document.

Median Barrier Existing _____
Proposed (Concrete Barrier / Thrie Beam / Other) _____

Roadway Design Scoping

Mainline Operations

Mainline Highway Widening
Existing pavement to be rehabilitated with Asphalt Concrete / Rubberized AC / PCC.
Widen existing _____ lane facility to _____ lanes. R/W acquisition for _____ lanes.
Local street structures to span _____ lanes of highway (for future requirements).
Upgrade existing facility to:

- ❏ Expressway Standards
- ❏ Freeway Standards
- ❏ Controlled Access Highway
- ❏ Traversable Highway
- ❏ Improve Vertical Clearance
- ❏ Adequate Falsework Clearance

Ramp / Street Intersection Improvements

- ❏ New Signals
- ❏ Modify Signals
- ❏ Right Turn Lanes
- ❏ Widening For Localized Through Lanes
- ❏ Merging Lanes
- ❏ Deceleration / Acceleration Lanes
- ❏ Left Turn Lanes
- ❏ > 300 VPH Left Turn (Requires Double Left Turn)
- ❏ Interchange Spacing
- ❏ Ramps Intersect Local Street < 4 % Grade
- ❏ Intersection Spacing
- ❏ Exit Ramps > 1,500 VPH Designed As Two Lane Exit
- ❏ Single Lane Ramps Exceeding 300 M Widened To Two Lanes
- ❏ Other_____

Operational Improvements

Truck Climbing Lane
- ❏ Sustained Grade Exceeding 2% And Total Rise Exceeds 15 M.
- ❏ Other_____

Auxiliary Lanes
- ❏ When 600 M Between Successive On-Ramps.
- ❏ Two Lane Exit Ramps Have 400 M Auxiliary Lane.
- ❏ Weaving < 500 M between Off-Ramp and On-Ramp.
- ❏ Other_____

Right of Way Access Control

❑ Existing access control extends at least 15 m beyond end of curb return, radius or taper.
❑ New construction access control extends at least 30 m (urban areas) or 100 m (rural areas) beyond end of curb returns, radius or taper.
❑ Other_____

Highway Planting

❑ Replacement
❑ Median
❑ Mitigation

Safety

❑ Off-Freeway Access
❑ Maintenance Vehicle Pull-Out

Roadside Management

❑ Slope paving
❑ Gore paving
❑ Roadside paving

Stormwater

❑ Erosion control
❑ Drainage
❑ Slope design

Structures

❑ New Bridge
❑ Bridge Rehab
❑ Retaining Wall
❑ Other _____
❑ On STRAIN list for _____

Additional Studies

Identify additional studies that may be required including resources and schedules.

_____

_____

_____

_____

_____

Preliminary Evaluation provided by:

Project Engineer_____ Date _____

Design Manager _____ Date _____

Design Concept approved by:

Project Development Coordinator _____ Date _____

Conceptual approval in no way implies that any non-standard features currently identified or identified in the future will be approved. Non-standard features will need to be identified, fully analyzed and justified prior to approval (via a design exception fact sheet) of the selected alternative.

Reviewed by:

Project Manager _____ Date _____

PDS Traffic Forecasting, Analysis and Operations Scoping Checklist

Project Information

District _____ County _____ Route _____ Kilometer Post (Post Mile) _____ EA _____
Description (include how project was identified: system planning, safety investigation, highway and freeway surveillance, etc.)
_____
_____
_____
_____

Project Manager _____
Phone #_____
Project Engineer _____
Phone #_____
Traffic Forecasting Functional Manager _____
Phone #_____
Traffic Operations Functional Manager _____
Phone #_____

Traffic Forecasting, Traffic Analysis Scoping

Describe and identify in the following sections a general description of the existing traffic and forecasted traffic (using existing data and transportation concept reports). Analyze traffic data and determine what traffic operational conditions are anticipated. Identify any additional studies needed to accurately forecast and fully analyze the traffic operations as part of the preparation of the environmental document. Consult with the District Intergovernmental Review/California Environmental Quality Act Coordinator for applicable local agency studies of land development proposals.

Under traffic modeling assumptions, traffic models should be validated and calibrated. The general plan buildout should be used to incorporate potential land use changes that are probable in the future. An interim year may be selected to incorporate a significant land use change or development.

At the PSR (PDS) stage, the traffic forecasting and analysis tasks are intended to utilize readily available
information and traffic models. At this stage of the project development process, it is not intended that extensive effort be devoted to the generation of traffic data and to the

significant updating of traffic models. If necessary, these tasks will occur at later stages of the process. However, exceptions may be
necessary in cases where the traffic data or models are highly suspect.

Traffic Operations Scoping

Based on the traffic analysis, describe and identify in the following sections a general description of the traffic operational improvements required (auxiliary lanes, signalized intersections, etc.) to address the traffic operational conditions and applicable warrants. The traffic operation improvements should be discussed in sufficient detail to identify the project's major geometric features and operations issues. Also discuss in detail traffic management system improvements (ramp metering, CMS, HOV lanes, etc.) to be incorporated. Discuss any components of the traffic management system that may be controversial during development of the environmental document.

Project Screening

1. Project Features: New R/W? _____ Excavation or fill? _____

2. Project Setting
_____

Rural or
Urban_____

Current land uses
_____

Adjacent land uses
_____

(industrial, light industry, commercial, agricultural, residential, etc.)

Existing Traffic Operational Conditions and Warrants Supporting the Need for the Improvement

Mainline highway
_____

_____

Ramp intersection
_____
_____

Merge / diverge

_____

_____

Street intersection

_____

_____

_____

Weaving / merging (spacing)

_____

_____

Other

_____

_____

Traffic Study and Analysis Anticipated

Traffic Modeling Assumptions

o Use Local Model
o Update New Model
o New Model
o Existing Traffic Counts
o New Traffic Counts
o Historical Growth
o General Plan (GP) Buildout
o Pro-Rate GP Growth

o Existing Year ( )
o Design Year ( )
o Interim Year ( )
Other

_____

_____

Traffic Analysis

o Mainline LOS
o Merge/Diverge LOS
o Ramp Int. LOS
o Adjacent IC LOS
o Ramp Metering (open)
o Ramp Metering (later)
o Left/Right Turn Storage
o Accident / Safety Analysis
o Intersection Queues
o Construction Staging
o Project Staging

Other

_____

_____

References: Guide for the Preparation of Traffic Impact Studies, Caltrans January 2001; Highway Capacity Manual: Transportation Research Board

Traffic Operations Scoping

Traffic Operational Improvements

Attach the project location map to this checklist to show location of all traffic operations improvements anticipated.

o Auxiliary Lanes
o Intersection Improvements
o Truck Climbing Lane
o New Signals
o Modify Signals
o Merging Improvements
o Weaving Improvements
o Deceleration / Acceleration Lanes
Other

_____

_____

Traffic Management Systems

Attach the project location map to this checklist to show location of all traffic management systems identified.

o Ramp Meters
o HOV Ramp Bypass
o Mainline HOV Lanes
o Detector Loops
o Communication Networks (fiber optic, telephone, etc.)
o Closed Circuit Television
o Changeable Message Sign
o Highway Advisory Radio
Other
_____
_____

Discuss strategies (technical analysis, public outreach, etc.) to secure local agency and public support to implement HOV
lanes and ramp metering:

_____
_____
_____

Preliminary Traffic Forecasting Evaluation provided by:

Traffic Forecasting_____ Date _____

Preliminary Traffic Operations Evaluation provided by:

Traffic Operation Engineer _____ Date _____

Traffic Electrical Engineer _____ Date _____

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Return to Project Development Procedures Manual Bulletin

PSR Evaluation Checklist

EA _____

Date_____

Concerns of applicable permitting agencies on the need and purpose of the project:
Potential impact to scope cost or schedule:
Recommended actions:
Any exclusion of applicable Traffic Management System (TMS) elements, replacement planting, environmental mitigation, environmental enhancement opportunities, maintenance needs (structural and roadway), and relinquishment requirements:
Potential impact to scope cost or schedule:
Recommended actions:
Request for work that is requested by a customer, but is not consistent with the primary need and purpose.
Potential impact to scope cost or schedule:
Recommended actions:
Non-standard features:
Potential impact to scope cost or schedule:
Recommended actions:

If applicable, availability of non-STIP funding sources and commitments:
Potential impact to scope cost or schedule:
Recommended actions:
Deadlines for use of funding, other than STIP funds:
Potential impact to scope cost or schedule:
Recommended actions:
Environmental Investigations (e.g, study windows, right of entry, etc.)
Potential impact to scope cost or schedule:
Recommended actions:
Permit Issues (e.g., regulatory requirements, responsible parties)
Potential impact to scope cost or schedule:
Recommended actions:
Identification of alternatives that have been suggested which are not considered viable for study.
Potential impact to scope cost or schedule:
Recommended actions:

Right of Way Issues (acquisition, utilities).
Potential impact to scope cost or schedule:
Recommended actions:
Other issues:
Potential impact to scope cost or schedule:
Recommended actions:

It is understood that for the PSR(PDS), the studies may not be completed and several assumptions must be made. Completion of the checklist represents a snapshot of key issues and opportunities which are likely to affect the scope, cost or schedule. As such, the checklist can be used to focus discussions with Management on project specific issues. The issues should be summarized in the Project Study Report.

Example issue:

Environmental Investigations (e.g., study windows, right of entry, etc.)
Biological studies will take two seasons to complete. Studies are scheduled to begin in April 2003. Negotiations with property owners for access have begun and initial discussions look promising. Sunset clause for encumbering capital for local agency share is 2006
Potential impact to scope cost or schedule: Lack of access to property for study can delay project for up to two years and put City X funds of $500,000 at risk.
Recommended actions: Continue to get right of entry from property owners, notify City X of potential risk, identify other funds that may come available if project is delayed.

Dist. – Co. - Rte. – KP (PM).
Month/Year

PROJECT STUDY REPORT
(Project Development Support)

This document can be used to program only the Engineering and Environmental Support for Project Approval and Environmental Document component. The remaining support and capital components of the project are preliminary estimates and are not suitable for programming purposes. Either a Supplement PSR or a Project Report will serve as the programming document for the remaining support and capital components of the project.

Vicinity Map

Show:

- Study limits
- Topographical Features Listed in Report
- North Arrow

On Route _____

Between _____

And _____

SUBMITTED BY: (Optional)

_____
LOCAL AGENCY OR INTIATING FUNCTIONAL MANAGER

APPROVAL RECOMMENDED BY:

_____
PROJECT MANAGER

APPROVED:

_____ _____
DISTRICT DIRECTOR *DATE*

Dist. - Co. - Rte. – KP (PM)

This Project Study Report (Project Development Support) has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

REGISTERED CIVIL ENGINEER *DATE*

Dist.-Co.-Rte.-
KP (PM)
RU EA
Program
Identification
Project Limits

1. Introduction

2. Background

3. Need and Purpose –

4. Alternatives –

   Concurrence by the Project Development Coordinator for further study of the viable alternatives included in this PSR(PDS) does not constitute approval of any non-standard features identified currently or in the future. Separate documentation and approval(s) will be required as per Chapter 21 of the PDPM.

5. System and Regional Planning

6. Environmental Determination and Environmental Issues –

7. Right of Way

8. Funding/Scheduling

Capital Outlay Support Estimate for PA/ED

Fiscal Year	STIP PY's/$'s		Other Funding Sources PY's/$'s	
	PY's	$'s	PY's	$'s
00/01				
01/02				
02/03				
03/04				
Total Support Cost				

Capital Outlay Estimate

	Range for Total Cost	STIP Funds	Fund Source "A"
Alternative 1			
Alternative 2			
Alternative3			
Alternative 4			

The level of detail available to develop these capital cost estimates is only accurate to within the above ranges and are useful for long range planning purposes only. The capital costs should not be used to program or commit capital funds. The Project Report will serve as the appropriate document from which the remaining support and capital components of the project will be programmed.

Tentative Project Schedule

Milestone	**Fiscal Year**
Circulate Draft Project Report/ Draft ED	
Public Hearing	
PA/ED	
PS&E	
Construction Completion	

Only the "PA/ED" milestone is to be used for programming commitments. All other milestones are used to indicate relative time frames for planning purposes.

9. Programming Recommendation

10. District Contact